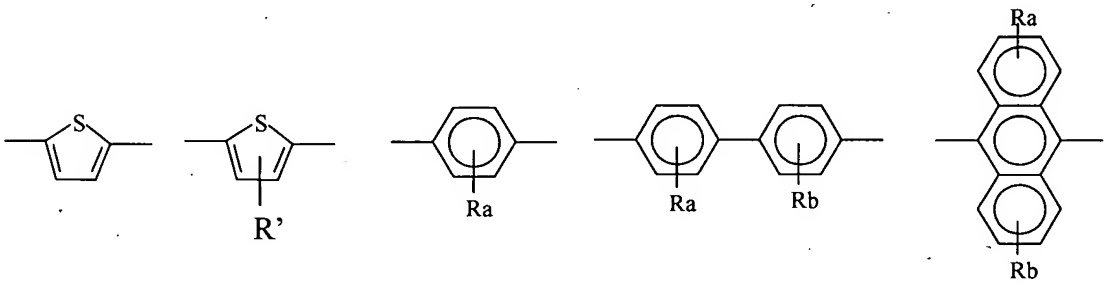
CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A thienylene-arylene polymer ~~comprised~~ consisting of a repeating segment containing at least one 2,5-thienylene unit selected from (I) and (II), and from about one to about three arylene units selected from (IIIa), (IIIb), and/or (IIIc)



(I) (II) (IIIa) (IIIb) (IIIc)

wherein R is an alkyl or an alkoxy; R' is halogen, alkyl, or alkoxy; a and b represent the number of Rs; and a and b are independently selected from 1 and 2.

2. (Original) A polymer in accordance with claim 1 wherein R is alkyl or alkoxy containing from about 1 to about 25 carbon atoms; R' is halogen, alkyl or alkoxy, each containing from about 1 to about 30 atoms, and wherein the number of 2,5-thienylene (I) and R'-substituted 2,5-thienylene units (II) in the repeating segment each independently represent a number of from 0 to about 10, provided at least one of said units is present.

3. (Cancelled).

4. (Original) A polymer in accordance with claim 1 wherein R is alkyl or alkoxy selected from the group consisting of pentyl, pentyloxy, hexyl, hexyloxy, heptyl, heptyloxy, octyl, octyloxy, nonyl, nonyloxy, decyl, decyloxy, undecyl, undecyloxy, dodecyl, dodecyloxy, tridecyl, tridecyloxy, tetradecyl, tetradecyloxy, pentadecyl, pentadecyloxy.

5. (Original) A polymer in accordance with claim 1 wherein R' is alkyl or alkoxy selected from the group consisting of methyl, methoxy, ethyl, ethoxy, propyl, propoxy, butyl, butoxy, pentyl, pentyloxy, hexyl, hexyloxy, heptyl, heptyloxy, octyl, octyloxy, nonyl, nonyloxy, decyl, decyloxy, undecyl, undecyloxy, dodecyl, dodecyloxy, tridecyl, tridecyloxy, tetradecyl, tetradecyloxy, pentadecyl, and pentadecyloxy.

6. (Original) A polymer in accordance with claim 1 wherein said arylene is a dialkylphenylene or dialkoxyphenylene.

7. (Original) A polymer in accordance with claim 6 wherein dialkoxyphenylene is selected.

8. (Original) A polymer in accordance with claim 7 wherein said dialkoxyphenylene is selected from the group consisting of bis(pentyloxy)phenylene, bis(hexyloxy)phenylene, bis(heptyloxy)phenylene, bis(nonyloxy)phenylene, bis(undecyloxy)phenylene, bis(dodecyloxy) phenylene, bis(tridecyloxy)phenylene, bis(tetradecyloxy)phenylene, and bis(pentadecyloxy)phenylene.

9. (Cancelled).

10. (Currently Amended) A polymer in accordance with claim ~~9~~ 14 wherein said dialkylphenylene is selected from the group consisting of dipentylphenylene, dihexylphenylene, diheptylphenylene, dioctylphenylene, dinonylphenylene, didecylphenylene, bis(undecyl)phenylene, bis(dodecyl)phenylene, bis(tridecyl)phenylene, bis(tetradecyl)phenylene, and bis(pentadecyl)phenylene.

11. (Original) A polymer in accordance with claim 1 wherein R is alkyl or alkoxy containing from about 5 to about 25 carbon atoms, and R′ is alkyl or alkoxy containing from 1 to about 25 carbon atoms

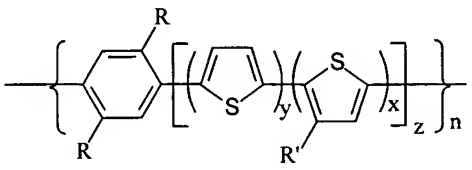
12. (Original) A polymer in accordance with claim 1 wherein R′ is halogen.

13. (Original) A polymer in accordance with claim 1 wherein each of a and b is 1.

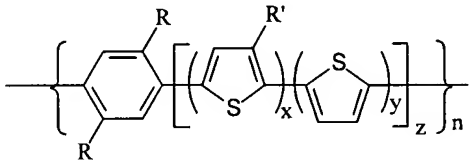
14. (Original) A polymer in accordance with claim 1 wherein the arylene of the thienylene-arylene polymer is a dialkylphenylene.

15. (Original) A polymer in accordance with claim 1 wherein the arylene is a dialkylphenylene or dialkoxyphenylene selected from the group consisting of dipentylphenylene, dihexylphenylene, diheptylphenylene, dioctylphenylene, dinonylphenylene, didecylphenylene, bis(undecyl)phenylene, bis(dodecyl)phenylene, bis(tridecyl)phenylene, bis(tetradecyl)phenylene, bis(pentadecyl)phenylene, bis(pentyloxy) phenylene, bis(hexyloxy)phenylene, bis(heptyloxy)phenylene, bis(octyloxy)phenylene, bis(nonyloxy)phenylene, bis(decyloxy) phenylene, bis(undecyloxy)phenylene, bis(dodecyloxy)phenylene, bis(tridecyloxy) phenylene, bis(tetradecyloxy)phenylene, and bis(pentadecyloxy)phenylene.

16. (Previously Presented) A polymer comprised of a thienylene-arylene polymer represented by Formula (IV-a) or (IV-b)



(IV-a)



(IV-b)

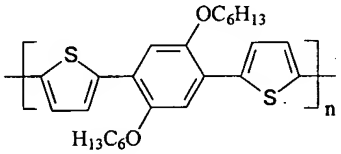
wherein R is an alkyl or alkoxy; R' is halogen, alkyl or alkoxy; x and y are independently selected from 0 to about 10, provided that the sum of x and y is equal to at least 1; z is about 1 to about 5, and n is the degree of polymerization, or the number of repeating segments in the thienylene-arylene polymer, and wherein the number of said repeating segments is from about 5 to about 500.

17. (Original) A polymer in accordance with claim 16 wherein R is pentyl, hexyl, heptyl, octyl, nonyl, decyl, undecyl, dodecyl, tridecyl, tetradecyl, pentyldecyl, pentyloxy, hexyloxy, heptyloxy, octyloxy, nonyloxy, decyloxy, undecyloxy, dodecyloxy, tridecyloxy, tetradecyloxy, or pentadecyloxy.

18. (Original) A polymer in accordance with claim 16 wherein R′ is methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, undecyl, dodecyl, tridecyl, tetradecyl, pentyldecyl, methoxy, ethoxy, propoxy, butoxy, pentyloxy, hexyloxy, heptyloxy, octyloxy, nonyloxy, decyloxy, undecyloxy, dodecyloxy, tridecyloxy, tetradecyloxy, or pentadecyloxy.

19. (Original) A polymer in accordance with claim 16 wherein x, y and z are each independently a number of from about 1 to about 5.

20. (Currently Amended) A polymer in accordance with claim 16 wherein said thienylene-arylene polymer (IV-a) or (IV-b) is selected from polymers (1) through (19)



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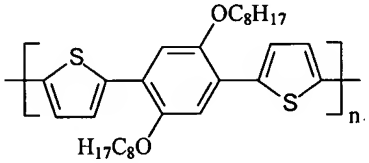

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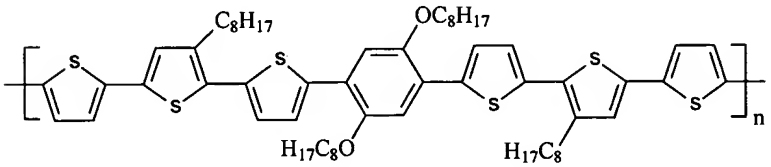

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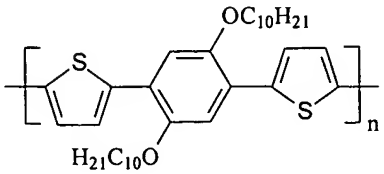

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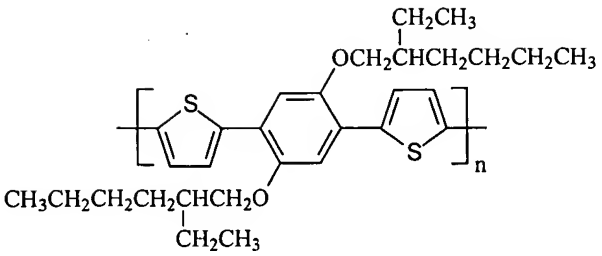

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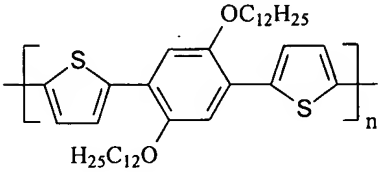

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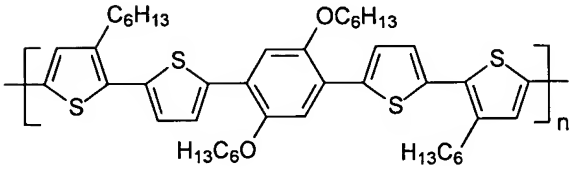

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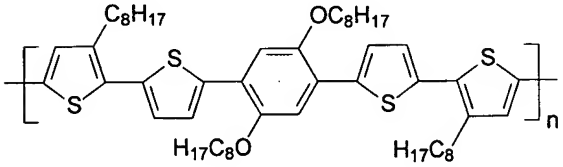

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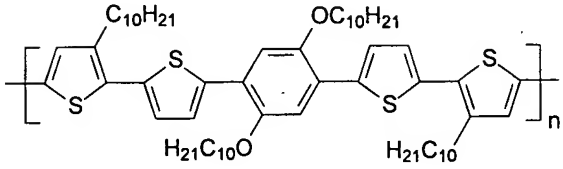

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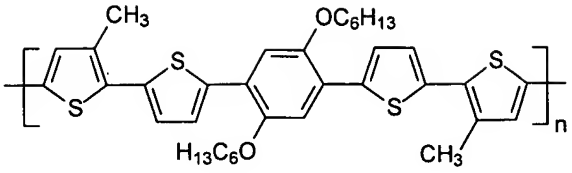

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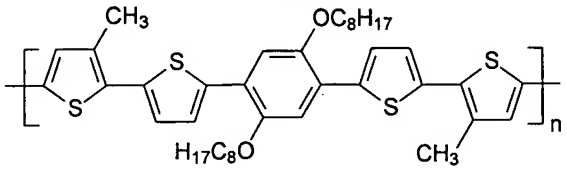

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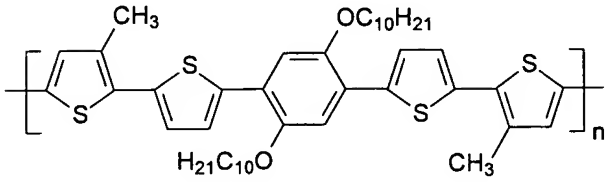

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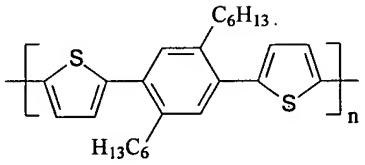

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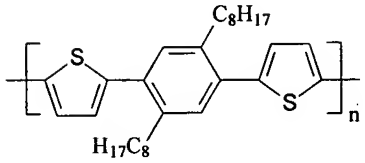

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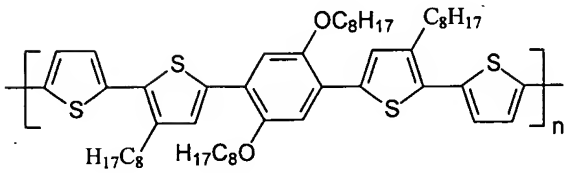

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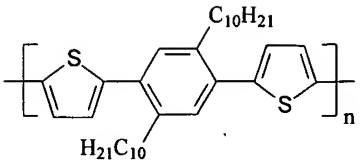

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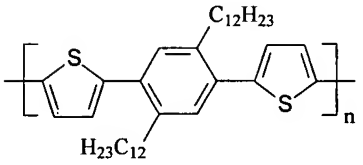

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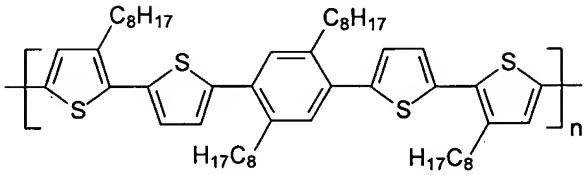

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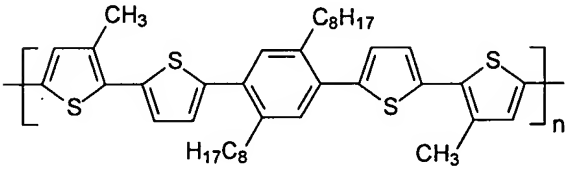
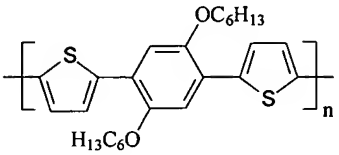


(19)

wherein n is the degree of polymerization, or the number of repeating segments in the thienylene-arylene polymer~~, which n is optionally a number of from about 5 to about 200~~.

21. (Original) A polymer in accordance with claim 16 wherein said thienylene-arylene is selected from polymers (1) through (15)



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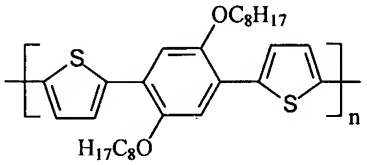

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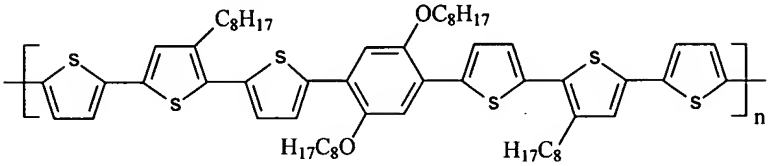

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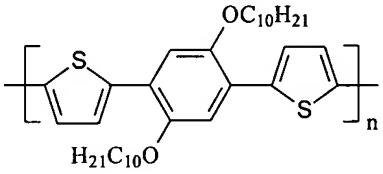

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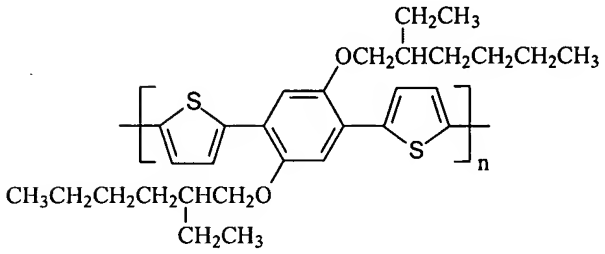

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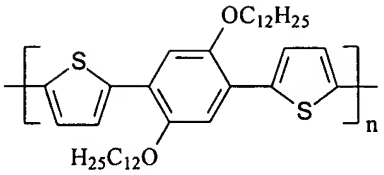

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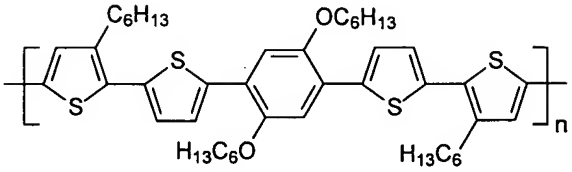

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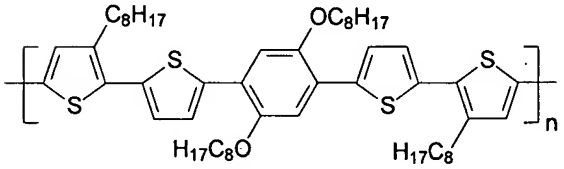

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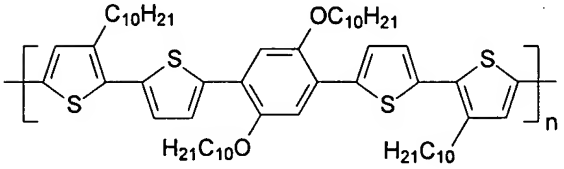

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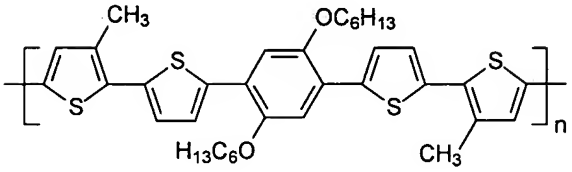

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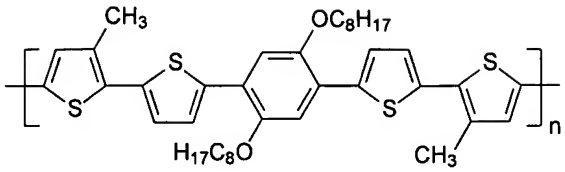

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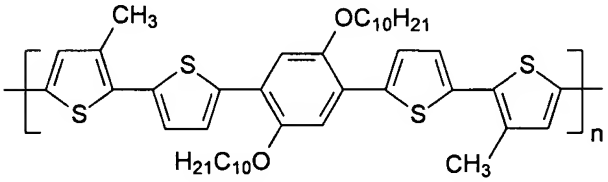

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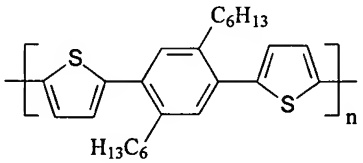

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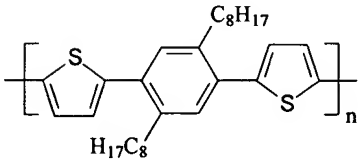

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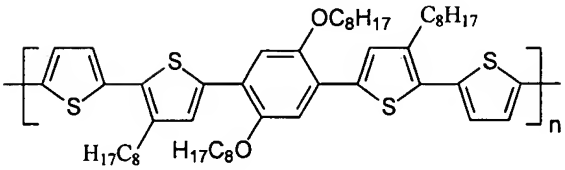
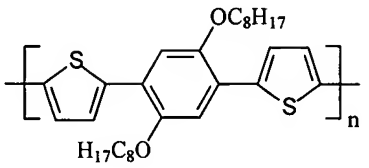


(15)

wherein n is a number of from about 5 to about 200.

22. (Original) A polymer in accordance with claim 16 wherein said thienylene-arylene polymer is alternatively



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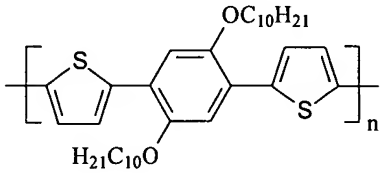

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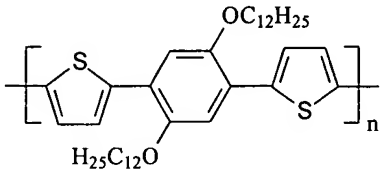

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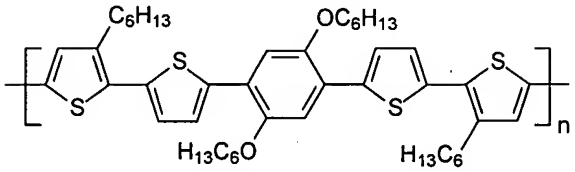

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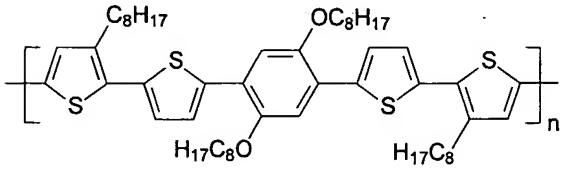

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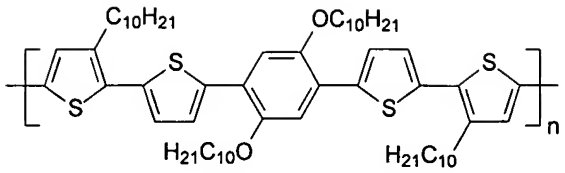
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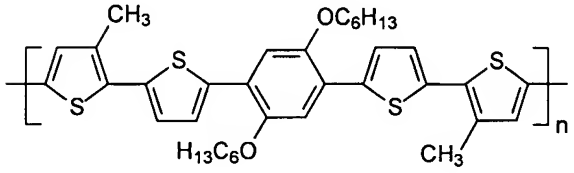
S
S
S
S
n
H21C10O
H21C10

(9)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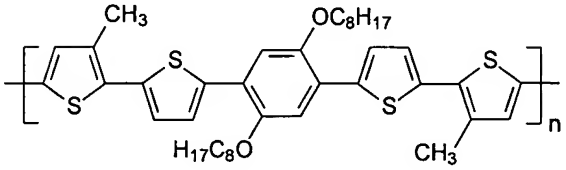
S
S
S
S
n
H13C6O
CH3

(10)


CH3
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S
S
S
n
H17C8O
CH3

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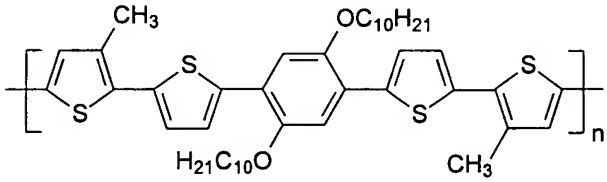
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S
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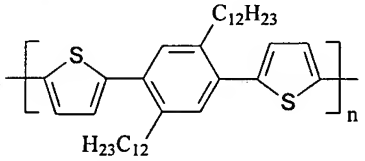
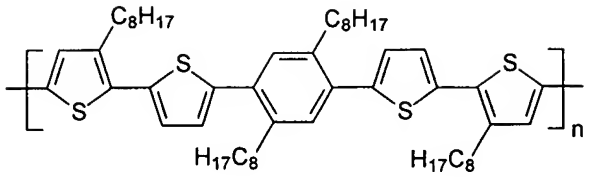
H21C10O
CH3

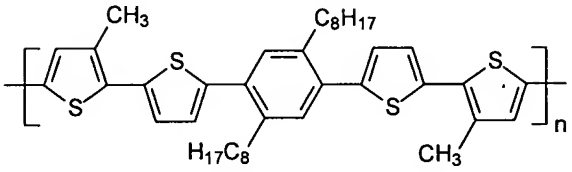
(12)


C12H23
S
S
n
H23C12

(17)



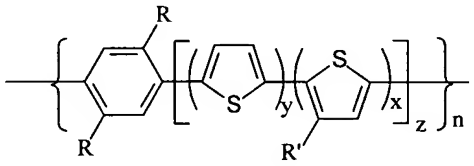
(18)



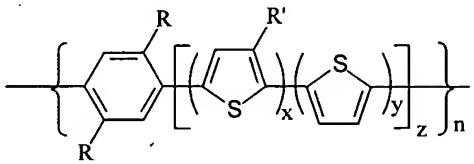
(19)

wherein n is a number of from about 5 to about 200.

23. (Previously Presented) A polymer represented by Formula (IV-a) or (IV-b)



(IV-a)

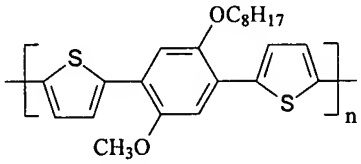


(IV-b)

wherein R is an alkyl or alkoxy with about 5 or more carbon atoms; R′ is halogen, alkyl or alkoxy of 1 to about 30 carbon atoms; x and y are each independently from 0 to about 10, provided that the sum of x and y is equal to at least 1; z is about 1 to about 5, and n is the degree of polymerization, or the number of repeating segments.

24. (Original) A polymer in accordance with claim 7 wherein said dialkoxyphenylene is bis(octyloxy)phenylene or bis(decyloxy)phenylene.

25. (Currently Amended) A thienylene-arylene polymer represented by Formula 20



(20)

wherein n is the degree of polymerization, or the number of repeating segments in the thienylene-arylene polymer, ~~which~~ and n is ~~optionally~~ a number of from about 5 to about 200.